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Making things real : ethics and order on the internet

these settings, new social forms are indeed in evidence. Identities are being performed and reassembled in new ways; relationships and events that could have no other existence are conducted through these textual means. In the 'sexpics' scene I studied, people were exchanging sexual representations, building erotic relationships and communities, even 'having sex' with each other, all without exchanging any material 'stuff' other than representations, and all without reference to any material reality beyond the screen. But the conclusion of all this was the very opposite of a dematerialization, or even a virtualization, of social and ethical life. Participants moved urgently and often ingeniously to make their world more rather than less material; and they were doing so 'all the way down'. That is to say, they were not securing some material base upon which new identities could be performed, but rather were materializing their world at every level as part of a single ethical concern to establish social order.

In fact, the very notion of materialization should indicate something that is accomplished rather than pregiven (or denied): to materialize is to make something real by making it into a thing that is public, durable, normatively stable and therefore usable by a social group. Materialization – with its very strong connotations of both 'realness' and 'thingness' – is a normative accomplishment. The appearance of things, their thingly nature, their materiality was an achievement; and it was an achievement that was itself normative. Indeed, to materialize their objects and relationships participants had to reference not material reality but rather the ethical order they were trying to sustain. The issue of materiality was actually prompted by ethical problems arising within the scene: threats to social order, dangers of ethical disorder, were registered in terms of a loss of reality or 'realness'. Making things material was a way of reproducing ethical order and repairing its failures.

Above all, it was a gift economy (the exchange of sexual pictures as gifts) that materialized both objects and social order. The gift economy was not a materialization of ethics as in a conventional Durkheimian analysis (in which exchanged objects symbolize, and therefore stabilize and reproduce, the social order). Rather than things representing pregiven social bonds, the sociality of the exchange relationships depended on the participants' ability to materialize, stabilize and validate the objects they exchanged. Social order

some areas of the Internet, in which action takes place at an apparent distance from physicality, one can foreground the 'performative' nature of social order and identity. That is to say, one can foreground those poststructuralist arguments (most evidently, Judith Butler's) to the effect that regulatory social discourses take precedence over the social structuring of materialities such as bodies and spaces (Bassett 1997). Objectifications such as sexed bodies emerge from and reproduce the overall pattern of sociality. However, this claim is a far cry from that cyberutopian voluntarism which argues that dematerialization allows participants to liberate themselves from normative fixity. To the contrary, it would go to argue that we should look to the normative orders that operate in cyberspace in order to explain the kinds of materiality that are in fact produced there.

The precedence of ethics over ontology has a particular import in the case discussed here because social action in this setting centres on exchange, indeed on trade. The obvious question to ask would be, how can there be orderly exchange unless objects, subjects and transactions can be stabilized as enduring things? This question is indeed central to participants engaged in the sexpics trade on IRC, and we will consider mechanisms by which they make things more thing-like, a process which might be related to Callon's (1998) analyses of making markets: making materialities is an essential aspect of framing 'spaces of calculation', such as markets. However, the sexpics trade begs a prior question, which also hinges on materiality: why do participants bother in the first place? Why should they materialize objects, people and transactions in market-like forms (why do they produce 'an economy') when what they are in fact doing is circulating infinitely reproducible digital files, available without cost in overwhelming numbers, and when, therefore, issues such as scarcity or theft (and hence their cognates, economizing and property) are apparently nonsensical? The point I will be arguing is that participants' interest in sustaining an ethical social order is primary. It is *not* (as in much economic sociology and anthropology) that an ethical framework is necessary in order to maintain orderly exchange but that orderly exchange is necessary in order to sustain normative frameworks, and that such exchange requires materialities. These materialities may be constructed in quite varied ways. In the present case, market-like exchange – in which things are materialized as discrete commodities – is concerned with regulating relations between strangers: not only to manage things like distrust between transacting strangers but also positively to *create* strangers where this is appropriate. However, participants also materialize things in more gift-like forms, in which boundaries between self, other and object dissolve in various ways. They do so as part of a process of *making* friends or sexual partners. That is to say, participants do not bring normative structures to bear in evaluating pre-existing things; rather social values call things into existence in particular forms. Again, it is the 'ought' which produces the 'is'. Materiality needs to be understood as a point within processes of valorization.

Sexpics trading on IRC[1]

Let us first set the scene: Internet Relay Chat (IRC) is an on-line chat system that allows large numbers of users to log on simultaneously to a shared communicative space on the Internet. They can chat with others, individually or collectively (in 'channels'), by transmitting typed lines of text. People logged into the same chat window or channel see the same flow of textual speech acts (though frequently appearing in slightly different sequence or tempo). They can also send and receive digital files which contain images (still or video), sounds, programmes or texts. Hence the stage is set for a continuous flow of both sexually explicit imagery and sexually explicit interaction (flirting, cybersex, shared fantasies and performances). Each flow can be contextualised by the other, or carry on independently; each can take divergent forms. These flows in fact represent numerous kinds of exchange such as market-type transactions with quasi-prices, gifting, stealing, 'flooding'[2], interactive writing. Moreover, one can distinguish participants and scenes that are more oriented towards trading than with sexuality; and these trade-oriented exchanges themselves break down into quite anonymous, one-off and even automated trades (see below) as opposed to trading relations extended over time. Serious traders with large collections might build up exchange networks with other serious traders – much like hobbyists concerned with stamps or other collectibles, in which trading is embedded in friendships, exchange of expertise or leadership roles in the channel community (serious traders are generally also 'channel ops', ie they have powers to police IRC social scenes). The bulk of participants are anonymous traders, strangers getting what they want from other strangers. On the other hand, many participants and interactions are more about sexual interaction than trading: the interest is in flirting, eroticising, getting a partner for cybersex or a longer-term relationship that might continue off-line. A direct, personal invitation to trade is often simply the equivalent of a chat-up line, a way to make contact with an opposite-sex identified other, and one or both participants might rapidly move to eroticise the trading transaction ('is that the kind of thing you like?', 'do you look like her?'). Conversely, the sexual chat-up or even cybersex is often simply a pretence to accomplish a broader sociality: conversations can move rapidly from trading to eroticising to talking about one's life, problems, tastes and so on. Hence – and this is crucial – while participants categorise different forms and processes of interaction they are not in practice discrete or unchanging. They can shift between forms, and can enact different kinds of interaction at the same time (sending someone a just measure of pics while chatting about something quite different).

The same fluidity characterizes the social settings. Public channels tend to be relatively anonymous, meeting points at which one can access the main trading mechanisms ('fserves', discussed below), or approach people individually. They can be large and quite tightly policed by channel ops (with specific software powers such as 'kicking' and 'banning'[3] people) in terms of people's behaviour, the kind of material that is permitted, desired or taboo, and defense of the channel's borders against marauding hackers (flood and bot wars). At the same time, most relationships beyond trade develop in private chats taking place away from the channels. Indeed, as people become more involved in IRC sexpics scenes through either trade, chat or both, they tend to spend less time in channels and rather rely on their own social networks which are objectified through their 'notify lists': one can list the

nicks and IP[4] addresses of one's on-line friends and traders on one's client software; when any of them appears on IRC, the software notifies you and you can contact them. Hence, networks are objectified through one's own listing choices. Nonetheless, most people will regularly *both* open up windows for particular channels and keep watch over their notifications, moving fluidly between public and private, trade and chat.

The sexualities that are performed or policed in these on-line spaces are in some respects considerably less fluid. On the one hand, the extensive if amorphous scene I looked at assumed that all men are exclusively heterosexual (and more or less homophobic) and that all women are bisexual (or 'bi-curious'). The extent to which this reflected participants' realities is beyond discussion here (though, for example, verified female informants often said that IRC allowed them to explore a broader range of desires than they felt possible off-line). The point here is that the discursive structure of the scene, and hence the narratives that structured much social life, was close to that of mainstream pornography: heterosexually potent men and sexually insatiable women. The material was generally 'hard' and often classed as 'bizarre' (a full run of fetishes) but there was strong policing against paedophilia and (to a lesser extent) bestiality; violent images were extremely rare. Again, this conforms to an ostracization of pariah sexualities closely corresponding to off-line norms.

At the same time, the prevailing concept of desire in the scene proclaimed a great fluidity, along the lines of, you can play at or explore being anything you want to be; you can 'do' whatever you fantasize, and interactively with others. Nonetheless, this desire was largely construed in a consumerist rather than deconstructive mode (Slater 2000b): people 'have' desires which they then pursue and satisfy, rather than destabilizing desires or inventing new ones. Some desires are considered distasteful or wrong by participants, but by and large (and with the major exception of paedophilia) it is simply felt that people should pursue them elsewhere, 'not in my backyard': to each their own, just go out and find the channel that caters to your proclivity. Hence, desires do not on the whole enter into dialogue with their 'others'. This consumerist sexuality connects with a general net libertarianism: complete opposition to censorship (in the form of either legal prohibition or market prices: things should be 'free' in both senses) is compatible with not particularly wanting to experience 'deviant' sexualities first hand. Hence, for example, the scenes I was observing existed in close proximity with a huge male gay scene, but with little overlap or antagonism and little if any dialogue.

Materiality on IRC

This entire scene is sustained, often with great difficulty and instability, under conditions of extreme 'dematerialization' of people, things and settings. However, we need to be very clear about what a lack of 'materiality' means in this particular context, and what it means both analytically and pragmatically, both to analysts and participants. Lack of 'materiality' presumably can take as many different forms as 'materiality' can. Indeed, IRC's lack of materiality is different from that which

obtains in other Internet settings such as MUDs (see below) or the World Wide Web. It is arguably not only different but more extreme. We can characterise it in terms of two features: digital textuality and dynamism.

To some extent, IRC shares its textuality with other Internet media: *everything* that happens on IRC takes the form of transmission or reception of a digital file, hence of coded information. The 'objects' exchanged are therefore infinitely replicable and infinitely malleable: an image can be altered or duplicated pixel by pixel, as can its name or size, at the level of manipulation of signs. Without doubt, this 'immateriality' requires considerable material resources in terms of such things as computing and telecommunications power, software development and of course labour. Moreover, it is unclear why we should not treat signs as material (they have to be inscribed somewhere, have some solid, perceivable support). Nonetheless, the association of textuality with lack of materiality makes complete sense on particular grounds that are common to both participants and most analysts: IRC is entirely textual and therefore not material in the sense that all the 'things' (objects, environments and others) that can be simultaneously perceived by interacting participants can also be changed at the level of codes, through the manipulation of sign systems rather than any other material. Hence, replicability and malleability. This includes interactive others: People are present to each other purely through the representations which they exchange with each other (you are what you type); hence, their social presence is malleable at the level of code (I can be present as a green-skinned hermaphrodite or as Don Slater, a sociologist in London University). Participants implicitly distinguished, therefore, between *realistic* and *real* identities (Slater 1998): realistic identities testify to the capacity of a performer (say, in cybersex) to manipulate signs to create a presence that could be interacted with 'as if' it was real; but they always reserved the right (thought they did not always invoke it) to judge the performance as 'real', authentic with respect to something beyond the textual construct. That is to say, they assumed the existence of a reality behind the mere realism, even if they could not know it or verify it directly.

In addition to malleability, one can also trace the anonymity and replicability of IRC identities to the purely textual nature of on-line 'things'. At the level of everyday on-line interaction, it is probably more difficult here than in other internet technologies to link the on-line textual presence of a person to their off-line body, to find out their 'real' name, address, appearance, and so on. Similarly, one off-line person can perform more than one IRC identity, by opening up another instance of their client program and logging in under a different 'nick' (nickname or handle). Conversely, behind a single on-line identity there might be two or more off-line bodies (a bunch of giggling teenagers or a married couple).

The second feature of IRC is even more extreme in relation to other Internet settings: IRC is entirely 'dynamic'. That is to say, the performance of identity and the actual presence of things or settings utterly depends upon the real physical presence of actual bodies at the same moment in time. Once those bodies leave the scene, nothing remains, including the scene itself. The two most important

examples of this are 'nicks' and channels. When I go on-line, I choose a nick to log on with by typing a command ('/nick Slater'); 'Slater' then appears; it disappears when I go off-line. It has no existence, and I have no claim on it, independently of my presence on-line: if someone adopts this nick in my absence, they become 'Slater', and I must choose a different nick. Similarly, a channel is created purely by someone typing a command ('#Slater'): it did not exist before; when the last person leaves it, it ceases to exist and leaves no trace: no one can ever know it even existed.

The dynamism of IRC – its 'present tense' character – gives an odd twist to materiality. It is certainly true that because of the distance between body and performance one can never know or authenticate any claim the other makes about themselves: is the person you are getting excited with through an exchange of explicit pics and chat *really* a 25 year old woman who is into SM? On the other hand, there is one thing about which one can be entirely certain: *that* there is some body, somewhere, at this very moment, exchanging erotic messages with you, otherwise this interaction could not be taking place ('bots' are easily detectable). The erotic charge of interactions on-line partly arises from the absolute certainty of a material body out there and yet the impossibility of trusting anything that it claims to be.

However, the dynamic character of IRC means that things and people appear and vanish with little continuity or predictability. In fact, just as texts have material supports (bytes), dynamic events do in fact leave material traces (log files on participants' computers, participants' memories). But the problem for IRC, again, is that these traces are outside the context of interaction: the 'things' that interacting participants deal with (including each other) can only be *shared* in the present, even if each person could later privately read over a log they kept of an interaction. The test here is the absence of any 'material culture': there are no on-line objectifications of a shared culture that persist independently of the presence of participants. By contrast with IRC, a newcomer to the MUDs[5] studied by Sherry Turkle (1995) and others, could 'read' an extensive material culture (descriptions of people and places, spaces to move around, etc) which exists quite independently of the people and interactions that constructed them. Indeed, IRC participants do in fact try to battle the dynamic, evanescent character of their social world by trying to hardwire their social normativity into the software they use, or by setting up websites and other more enduring, material and shared traces of themselves. The point is that in the absence of a reliable materiality that is 'naturally' produced by the medium itself, participants persistently experience the need to produce it themselves.

In fact, participants understand this extreme dematerialization in terms of both opportunity and danger. Dematerialization means wonderful opportunities to do such things as deceive and rip off others; get lots of free images; pretend to be who one wants to be and live out any fantasy, to explore sexual desires interactively with others, and so on. At the same time, dematerialization means an extreme social instability, a difficulty in sustaining the kinds of normative sociality in terms of which these opportunities have any meaning or value, let alone can be easily pursued. We can summarise this sense of instability, of the problematic nature of a lack of materiality, in two broad features (Slater

1998): Firstly, the unreliability of the ethical other: how can one invest emotionally, socially or 'materially' (in the exchange of pics) with an other who might vanish, untraceably, at any moment, and whose identity claims are unverifiable? To be an ethical other is to be accountable, hence to have a kind of 'object constancy': one can be identified over time and located in space. Secondly, the unreliability of ethical sociality: how can a normative social order be sustained over time – through processes such as socialisation, institutionalization, regulation and policing – if it does not have a collective memory embodied in a material culture, if it does not objectify itself in things, institutions, records or the memories of accountable persons, that persist beyond interactions in the present tense, that project a collective past into a normative, on-going future? To the extent that it lacks *enduring* materiality, IRC sociality has constantly to reinvent itself because it constantly forgets what it is.

Under these conditions, then, ethical sociality (as opposed to one-off exchanges of things or communications) is difficult and unreliable. Participants do manage to stabilize order and identity, but always provisionally and always with a sense of fighting against the odds. Hence, the issue of sustained ethical sociality is persistently topicalised by participants; indeed, it is an obsession. And it was crucial to the narratives by which they understood their experience of on-line life. These often consisted of stories of attacks by attacks by bots, flood wars and endless channel splits and secessions. That is to say, the story of their own communities was of constant war between order and disorder, in which the task was to create ever more complex technical defences (through software or through policing by ops) in order to sustain social structure.[6]

The paradox of 'leeching'

If lack of materiality is confronted by participants as part of a problem of normative order, then we might well look to the ways in which they in fact materialize things, and the kinds of normative frameworks through which they accomplish this. The most dramatic materialization encountered during the study revolved around a clear paradox: on the one hand, because of the dematerialized nature of things and people, the supply of sexualised images, and indeed sexuality, was experienced as effectively infinite: the notion of scarcity did not seem to apply. And yet the entire sexpics scene was preoccupied with an incessant war against 'leechers' and 'leeching', that is to say with ensuring that no one was allowed to 'get something for nothing', to illicitly take images without returning a just measure. Leechers were ethically consigned to the lowest circle of hell. In practical terms, impressive software technologies were deployed against them. But most importantly, despite the absence of scarcity, and the apparent meaninglessness of value, people persisted in framing these digital files as material commodities which could be treated as property and exchanged in measurable amounts at quasi-prices or exchange ratios. These ratios bore no relation to supply and demand (given that both were effectively limitless); but they clearly framed transactions as if they were occurring in commodity markets.

To give full weight to the paradox, we need to flesh out the notion of 'absence of scarcity'. One could characterise the IRC sexpics scene as a 'pornotopia': it was experienced by participants as a limitless, inexhaustible sea of sexualised representations and sexualised people. All transactions were 'free' both in the sense that nothing (except pariah sexualities) was censored and that nothing had to be paid for. Indeed, participants vehemently resisted the incursion of commercial pornography, even as they applied commercial models to their transactions: satisfaction was limited only by one's energy and luck in finding what one was after. The digital textual nature of the representations meant that they could be infinitely copied and circulated without any measurable cost (except time). At the same time, new images constantly entered into general circulation from numerous sources: people scanned in images from published material, or took screen shots from videos; images were taken from the huge number of commercial porn sites (usually for free because of the equally large IRC market in illegal passwords); or images of partners or of themselves were circulated as 'amateur' or 'personal' pics. Finally, the sense of pornotopia was intensified because the flow of sexual material was embedded in a sexualised context of interactive fantasies and cybersex: there was always an incipient implosion whereby the trading subjects merged with the material they traded. Participants certainly experienced the scene as beyond scarcity and value, as containing more sexual representations than they could ever feasibly consume. For example, despite having many gigabytes of images on their computer, participants often claimed that they never looked at them after the initial excitement of watching it download. It was not unusual for participants to report blithely that they had lost all their images in a hard disk crash, or had simply trashed them all in a fit of boredom, and were now out to stock up again.

The absence of materiality not only produced a sense of abundance in all these ways, but it also made nonsense of the idea of theft. It was not simply that a leecher was not taking anything of value, given the absence of scarcity and the lack of any measurable replacement cost. Much more than this, given the immateriality of these 'things' the very idea of 'taking something away' was entirely meaningless: even if I take an image from you without 'paying', that image is still there on your hard disk for your use. I have duplicated something, I have not removed it. Hence, there was no question of material harm or economic loss, indeed of any consequence whatsoever. The issues at stake could only be ethical.

The very concept of leeching is bizarre in this context, let alone the fury directed at it. However, let us postpone for the moment the question of why leeching was considered so vile and instead focus on what people did about it. We can see this most clearly in the way in which the trading process was extensively automated during the course of fieldwork. Technically speaking one can trade things with people on IRC in two ways. One can transfer a file direct to another person (DCC: direct computer to computer transfer), and trust them to reciprocate. Alternatively, one can use the 'fserve' (file serve) facility: you give another person a password which allows them to access your hard disk directly (or rather, a specified portion of it); they can then read on their screen lists of the contents of the subdirectories into which your picture files are organized; and they can then issue commands to

download files from your hard disk to theirs, or to upload files in return. This can be entirely automatic: the fserver can be set up to send announcements to selected channels, at specified intervals, giving the password ('trigger') and specifying what kinds of pics they have and want; and at what exchange ratio. The owner of the machine need not be anywhere near the machine; alternatively they can chat with the people they are fserving while the process goes on.

In both DCC and fserve trading, exchange ratios are established. DCC involves a clear barter relationship: send me five good quality blondes and I'll send you five of whatever you are collecting; I've got a great personal pic – send me a few Playboys in return. There is a clear materialization of a stable object which is closely akin to Callon's (1998) analysis of the market as a space of calculation: a 'file' is construed as a discrete entity which can be alienated and circulated independently of other objects. As a discrete thing, it can be talked about as property, dividing the participants into discrete subjects between whom it is passed. Regarding it as a discrete entity also renders it quantifiable in various ways: one can count numbers of files; or files can have measurable properties that count in exchange – for example, file size (which correlates with quality); or file names (which should label unique things; there is much dispute over renaming files to give the impression that a picture is either newer or more interesting than it is). At the same time, files can be regrouped and organized into categories or series so that their value is established in relation to larger structures of things (of which more below).

The economic model of barter makes some rational economic sense in direct exchange: it saves participants a lot of time in assessing what the other has and what they want, educating traders in their respective tastes; at the same time it ensures that neither goes to too much trouble while the other just sits back, receives the files and then runs off without reciprocating. Risk is limited to the possible loss of a few unreciprocated files. However, with fserves none of this should matter all that much. In offering someone an fserve one can simply give them the free run of your hard disk – indeed this is called giving someone 'leech rights'. In this case, all these materialities are entirely in the eye of the leecher and are of no interest to the server or the transaction if one remembers that people can 'take' any or all the images on the disk without any loss to the fserver. Of course the latter wants to increase their collections by ensuring that people upload as well as download images, but in principle it should be just as easy for them to do this by taking images from someone else's collection (in any case, they generally claim that uploaded images are all 'rubbish').

However, the development of sexpics trading followed exactly the opposite track, treating the fserve not as a simple way of giving things away and speeding up the circulation of non-scarce representations but rather as a way of regulating that circulation *automatically* on the basis of an entirely economic model. Basically, participants produced and circulated a range of software add-ons to the basic IRC client programmes which completely regulated trading anonymously and gave specific material forms to the act of trading, to the objects traded and to the traders. The most popular such add-on during the research was 'Hawkee's Leech-proof fserve': this automated the process of

making announcements in channels, issuing passwords and managing access to the fserve, but it also managed trade. The server could set a ratio – eg, a ratio of 1:5 meant that a customer could download 5kb of images for every one they uploaded. The fserve programme kept a running account of the balance of trade and stopped trade when the ratio was breached. Ratios typically were set at 1:4 or 5, but sometimes as high as ten. These settings bore no relationship to supply and demand, nor any discernable connection to competition (a 1:2 and a 1:10 might happily advertise, one after the other, in the same channel). At most, they seemed to relate to the fservers' desire to have a large volume of images as opposed to a low level of incoming 'rubbish'. The ratios were notional and yet absolute: they ensured that trading looked like real market trading, with quasi-prices, and that measurable quantities of commodities were indeed measured, or measured out.

The materialization of trade in the form of exchange of commodities was buttressed by two other materialities. Firstly, 'Hawkee's Leech-proof fserve' materialized the act of trading itself by 'hardwiring' it into the most basic *material* condition of social interaction, the program itself. It played the part of the regulatory institutions required to constitute any market, overcoming the anomic dynamism of IRC. It also rendered the rules of interaction impersonal and non-arbitrary, in the manner of general societal norms. Secondly, considerable attention was paid to IRC's incipient problem of the unreliability or unaccountability of ethical others. Hawkee's fserve system checked and stored not only the nick of any trader but also their IP address, which is a unique identifier. This meant that it could ensure that the same *person* could not trade under two different nicks simultaneously; it also meant that a person's account could be stored between trading sessions and they could carry on where they left off, even if they had to log onto IRC under a new nick. Essentially, Hawkee and others were committed to a concept of the trading partner as a unitary legal subject, a single accountable person corresponding to a single physical body and located at a unique and traceable real-world address. There was no desire for a profusion of unanchored identities apart from bodies, but a perceived necessity for discrete, accountable and embodied units. Of course the 'bodies' might still be found unreliable by other criteria: eg, there was escalating technological warfare here as everywhere on IRC between anarchic hackers and the forces of order; each new strategic defence system was met by more sophisticated means to get around it. However, the significant thing is the form of the battle rather than any party's enduring victory: it was a struggle to establish order by stabilizing it in entities that behaved like material *things* – tradable objects, transactional institutions and embodied subjects. And these things were materialised according to a specific normative model: commodity exchange.

Why commodity exchange? One could argue at a fairly general level (Rival et al. 1998, Slater 2000b, in press 2001) that there was a good fit between the kind of quasi-markets and pseudo prices described above and the overall libertarianism of much net-head ideology: participants largely saw the internet as a community constituted through interactions between autonomous, pre-existing individuals who pursued their own desires in a consumerist mode. Such a libertarianism defends two forms of liberty: the freedom of the self-defined individual and the circulation of 'free' goods (ie, one

should not have to pay real cash for anything; price and ownership limits the satisfaction of the individual's desires). However, the latter 'freedom' has to be limited, in good liberal fashion, to ensure that individuals do not harm each other. Hence, the regulation of exchange through pseudo-ratios symbolically honours the individual's rights while resisting real commodification and ownership, with all its attendant external regulation and authority. It is the liberalism of the wild west, of the self-regulating homesteaders, rather than the authoritarian neo-liberalism of real market societies.

Most importantly, this kind of libertarianism focuses on reciprocity between individuals. In a social order which lacks persistent institutions and a sense of enduring social order, and which is committed to seeing itself purely in terms of unfettered transactions between autonomous individuals, the return of a just measure is almost the only evidence available that interaction between individuals is ethical rather than lawless. People were *furious* when leeched, and would pursue a leecher from channel to channel in vigilante style, even gathering posses as they went. Again it has to be emphasised that 'just measure' was highly unstable and bore no relation to supply and demand, embodied labour or any other criteria of value. It was, quite simply, a matter of principle and a demonstration that one was indeed living in some kind of society. In this sense, people seemed to enter into exchange not to further their interests but in order to be social: the apparatus of commodity exchange – ratios, property, discrete materiality, quantification – was not imposed because there were scarce things to be allocated (there weren't) but in order to constitute some things as scarce, providing an idiom through which participants could manage other social values such as reciprocity.

This explanation works, and corresponds closely to much participant discourse. However, it misses an important point which might ground additional theorization: the kinds of normativity and materialization discussed so far represent only one pattern amongst others. Moreover, it is one that is very specifically bound up with relations between *strangers*. If an exchange developed into a relationship (flirtation, cybersex, friendship), or if one party was trying to push it in that direction, then all desire to ration things evaporated: exchange then took the form of giving freely, and giving itself generally became an act of 'wooing', flirting or eroticising the relationship; of demonstrating one's tastes; of creating an erotic ambiance through exchange; or of otherwise merging the object with the relationship. As the relationship changed, so too did the materialization of the images exchanged. For example, as a trade became eroticised, the chat became more sexualised, more pornographic; the other and everything they say is seen through a sexual filter, and joins the stream of erotic imagery that is also being transacted between the two. As the chat becomes more objectified as sexual stimuli, the images become more personified, more subjectified: they are less externalised as commodities and more regarded as emanations of the other or oneself, as standing in for the participants (eg, they are statements of the participants' tastes, desires, images of each other). In a sense, they start loosing their 'thingness' (and entirely their commodity status) and rather merge with a generalised stream of erotic action.

The division is not absolute: For example, serious traders with large and often specialist collections may well have continued trading relations with other traders in which issues of reciprocity persist. At the same time they will not take the form of the pseudo-quantitative ratios obtaining between strangers; rather, they will involve a generalized sense of reciprocity extending over time. Indeed, even in an anonymous and automated fserve, as soon as there is any direct communication between the two parties, the customer will almost invariably be granted 'leech rights'. That is to say, as soon as the exchange is embedded in *some* sense of broader sociality, participants do not have to demonstrate the existence of *any* sociality by insisting on reciprocity, and therefore on measurable and discrete objects. Instead, the objects tend to be treated as objectifications of participants' tastes or desires. Or – much more frequently – become increasingly irrelevant as the mere formal occasion for meeting up in the first place.

The contrast between automated quasi-markets and socially 'embedded' exchanges looks very like the contrast between commodity and gift economies so thoroughly enshrined in economic anthropology (Mauss 1973). However, it also undermines that distinction in two crucial and interrelated ways. Firstly, although there is a real empirical and analytical difference between gift and commodity, the distinction between gift economies and commodity economies is untenable (Slater in press 2002): not only do the two forms subsist within the same societies, but they mutually interact with each other (see Carrier 1994, Strathern 1990, Thomas 1991). We might agree with Strathern that 'gift' and 'commodity', rather than denoting ideal-types, instead constitute different heuristics which anthropologists may apply to the same field. We need only add that participants do something very similar, applying different criteria depending on their reading of the relationship and social space they are involved in, and with frequent discussion or disagreement about which heuristic is appropriate at any given moment. An on-line romance and an anonymous fserve are two extreme poles, but they exist in the same space, and can co-exist at the same time. The point is not to outline two different economies or principles of interaction, but rather to see the overall and mediating schemas of social value in which they can both subsist. This overall schema concerns issues of social stability, equity, dealing with strangers, relations to competing (eg, commercial) schemes of value, and more. It is such concepts of value, which mediate between different modes of exchange, that governs those modes of exchange and consequently the different materializations that might be established. In other words, the material forms with which things are endowed have to be understood as moments within the different processes of valorization that are available to participants within a particular social order, in terms of the different modes of being social that they value and strive for.

This leads to the second issue. In the sex pics scene, the commodity/gift distinction clearly and even crudely relates to the distinction between stranger and (intended) friend or sexual partner. To some extent, the distinction itself separates these kinds of interactional others, marks them and keeps them separate as different kinds of people, interactions and social spheres. Indeed, in accord with Michel Callon's (1998) line of argument, the sexpics 'marketplace' is constituted as a space of calculation in which objects are made discrete and transactable *in order that* exchange between strangers may be

created. Things are objectified as autonomous, measurable entities in order to establish a regime based on limited contracts and limited contacts between transactors.

And yet there is something more going on here. It is not simply that people are made into strangers in order to facilitate exchange and commodification but also the opposite: it is because they are strangers in the first place that they objectify images as measurable entities which can establish normative order between anonymous and unregulated persons. Neither move results in fixed and thoroughly segregated structures and roles. On the one hand, the commodity/gift distinction is a means for transforming strangers into other kinds of partners; on the other hand, it can also transform people into strangers: by automating trade through fserves, it is disembedded from more extensive sociality. What is most obvious here is not a rigid gift/commodity distinction, or an institutionalisation of market structures organised around strangers but rather the use of different mechanisms and forms of materialization to negotiate different constructions of ethical sociality.

'Mechanisms of materialization'

The gift/commodity distinction is not being invoked here in order to argue that IRC sexpics can be analysed in terms of binary opposites or ideal types. There is a plurality of both normative considerations and – consequently – materializations. This is the case for at least one banal reason: IRC was not a 'community' with a unified culture but a network of people with divergent, conflicting, context-dependent normative senses. Moreover, as indicated by the notion of 'dynamics', normativities changed wildly simply because socialization was so difficult: there was not much memory or tradition. The point, again, is that this was indeed treated by participants as a *problem* and they deployed a range of mechanisms to overcome it, on the whole unsuccessfully. In this sense, the automation of fserves is a poignant example: normative sociality was 'hardwired' into the very material underpinnings of the interaction setting (its software) precisely in order to sustain a sense of itself as living out an ethical sociality. And yet – as veterans of IRC sexpics, or indeed of other internet socialities, constantly complained – it seemed to destroy all sociality: people no longer talked to each other. Instead of regulating interactions between strangers, it constituted people as strangers.

Hence, in order to understand the range of both normativities and materializations we also need to analyse the specific mechanisms of materialization, the strategies by which the relation between a sense of society and a sense of materiality is mediated in very particular settings. I will therefore conclude by discussing the mechanisms that seemed most salient in the settings that I observed. This is not meant to be exhaustive but merely to round off a discussion of the complexity of the process of stabilizing social order through unstable and problematic 'things':

1. Techniques of embodiment: as discussed above and elsewhere (Slater 1998), the textuality and dynamism of IRC rendered problematic the ethical accountability of the other in interaction. To a

great extent, participants dealt with this by taking at face value the identity performances and claims of others but not attaching great weight to them, treating the other as merely a more or less realistic construction. On the other hand, as soon as they wanted to treat the other more seriously, invest emotionally in them, regard them and the relationship as *real* rather than *realistic*, they generally demanded a greater sense that the performance was attached to a single real body. This was generally pursued through two techniques which involved materializing the other. Firstly, participants might seek to progressively embody the other, to home in on their real physicality: for example, by moving from IRC to email, then phone calls, letters or even face-to-face meetings, in which each step closer embodied the other both by giving them an address (a location where a body could be found) and making more of the body visible (voice, handwriting, face). Secondly, participants sought 'object constancy' in the other by tracing their performance over time: was their performance consistent, was their commitment to the relationship consistent, could their performance be experienced as emanating from a single real body? In both cases, the reality of the relationship was experienced as depending on establishing the materiality of the other.

2. *Hardwiring sociality:* much of this paper has focused on an example of this – Hawkee's Leech-proof fserve – which could write normative rules of interaction into the very material base which sustained social life. IRC is to some extent special in the capacity of knowledgeable participants to alter not just the rules of the game but the material structures through which it is played, and to do so in relation to a normative sense of proper interaction (or an anarchic desire to strategically undermine it). At the same time, one can observe the same process in highly rationalized, commercial production of internet technologies – eg, the evolution of ICQ, Netscape and Microsoft chat facilities and web-based Java chat applets (as found on portals such as Yahoo!). All of these involve embodying notions of appropriate interaction within software protocols; they must also make the normativity evident and accessible to participants, commonsensically achievable at the interface level: eg, simple modes of inviting or ignoring invitations to interact or managing privacy issues. This evolution has often borrowed key features and ways of doing things from more unstable contexts such as IRC itself, and then hardwired them into more structured programmes.

3. *Reifying:* Again, this has been discussed in relation to treating images as discrete and unchanging entities, as thing-like; it also relates clearly to the kind of 'object constancy' which is desirable in one's interaction partners, achieved through techniques of embodiment. As labelling a set of mechanisms of materialization, it is important to note the way in which such processes contradict core tenets of net libertarianism: fixing of things and meanings, property, quantification. It specifically seeks to close down the possibilities opened up by the textuality and dynamism of Internet technologies. Indeed, it seeks to manage the apparent infinity and open-endedness of meaning. One clear example of this was the extensive categorization of sexual imagery: fserves would be organized into subdirectories labelled by types of sexual act, body parts or body types, number of sexual partners involved, age; similarly, pictures might be grouped as pictorial series (eg, a complete set of

images from a particular magazine photo spread). These enormous filing systems resembled a Sadeian enumeration, collection and accumulation of sexuality, as analyzed by Angela Carter (1979), a reduction of sexual flow into the accumulation of objects and facts. This was particularly vivid in the case of series collections, where the hobbyist's fetish of the complete collection gave the sexpics trade exactly the same structure as trainspotting or stamp collecting: turn the open-endedness of the world into a bounded, measurable and controllable set of things.

4. Authentication: It is not only individuals that are valorized by anchoring them in a real body; the same goes for the value of many of the images traded. A common strategy was for participants to valorize images not in relation to notions of quality or demand/rarity, but rather in relation to something like their ontological status. Two examples of this are discussed elsewhere (Slater 2000a). Firstly, two of the most popular genres on-line are 'amateur' pics (images which might be taken commercially but are not of commercial models) and 'personal' pics (which purport to be private images of the person who sent them, or his/her partner). In both cases, their value arises from their 'authentic' materiality: these claim to be directly connected to the bodies of real people. These genres are popular in commercial pornography as well, but they take on a particular power in the context of real-time trading when one party claims to be sending a personal picture of themselves. As a second example (discussed in Slater 2000a), there was a thriving specialist hobbyist trade in 'Scanmasters': Scanmaster was a Spanish technician who produced what were claimed to be the best scanned images, mainly of Playboy-style erotica. Collectors aimed to put together a full set of his copies, all with original files names and sizes. That is to say, they valorized the possession of a complete set of authentic copies, of real duplicates.

Conclusion

It is always dangerous to argue from the marginal case; and it is also dangerous to treat the Internet as if it were really a virtual space, insulated from the rest of social life rather than as a set of media technologies which are used by people within specific social contexts. On the other hand, what I have been trying to emphasise is not the marginal or bizarre nature of the IRC sexpics scene, or its disembedded and virtual character. To the contrary what is interesting in this case is the participants' great drive to normalize social life and to make it behave as if it were embedded in a reliable and transmissible normativity. It is this drive (in a context where it was extraordinarily to realize) which persistently entailed various kinds of materializations – of objects, persons and transactions – that participants found necessary in order to achieve such things as ethical accountability and a sense of social order. The production of economies where economizing made little sense simply testified to a need to make things real by re-casting social realities in the form of things; but so too did the desire, in other circumstances, to ground and authenticate the interactional other in a real body, or to merge images and chat in a single erotic flow.

It might be useful to conclude by framing this argument in a straightforwardly Durkheimian light (though one could equally do the same analysis by way of Mary Douglas). The question of materiality and immateriality on IRC, as elsewhere, is not a question of physicality or its lack (textuality, meaning, disembodiment). Searching for 'real' bodies and things only confuses the real question, what might be termed the question of social ontology (as opposed to its philosophical form). Materiality in the IRC sexpics scene was a matter of constituting entities that behaved as things, that had that externality, durability, persistence and constraining objectivity' by which Durkheim characterised *social* facts. And these kinds of things are social facts because they *are* society in an objectified form. Conversely, the problematic or unstable character of thingness produced a sense of the instability of social order. It is unsurprising, then, that different kinds of materiality were desired and achieved, as well as debated, confused, contested, such as those appropriate to exchange between strangers as opposed to between intimates. Each form of materiality was, of course, equally social in that it emerged from the same desire to sustain an ethical sociality (whatever one's ethical view of the things that were constituted and transacted). Put in other words, the constitution of social order took the form – here as anywhere – of a process of valorization, of constituting things that were appropriate to the kinds of ethical relationships that were to be reproduced through their transaction. Materiality – the production of social ontologies – needs to be understood as one moment within different and complex social processes of valorization.

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[1] This study took the form of a conventional ethnography, largely conducted on-line, over approximately eighteen months, comprising participant observation, on-line interviews, on-going communications with informants, documentary and textual analysis (of images, directories and collections, logs of conversations given me by informants). For discussions and defence of the appropriateness of on-line methodology for this study see Miller and Slater (2000; in press 2001), also Slater (in press 2001) and Hine (2000). It should be clear that the present article confines itself to a very particular aspect of this material – the ethical character of transactions – and, moreover, an aspect that is relatively separable from the ethical character of what was being transacted.

[2] IRC channels were prey to all manner of attack, such as 'flooding' (bombardment by huge numbers of automated messages) or 'bots' (mentioned below, software that, acting autonomously of its author, that could wreak various kinds of social havoc).

[3] Participants could be ejected from channels for various infringements, some publicly formulated or at the whim of a channel 'op'. They could then be banned permanently or for a term; software could be set to automatically detect their presence and exclude them. These could take the form of one-off, contained incidents or extended wars to take over or simply to wreck a particular channel.

[4] One adopts a nickname when logging onto IRC, and one can change it any time. An IP address, on the other hand is the unique numerical address assigned to one's computer within the TCP/IP (ie Internet) protocols.

[5] 'Multi-user dungeons', or dimensions, were originally game-based on-line interactive systems which not only allowed textual interaction largely similar to IRC but also allowed participants to construct characters and settings (textually) that persisted independently of their continued presence. Simply put, unlike on IRC, my room and a description of my character are available even when I am not 'there'.

[6] It has to be said that during the research I social decline generally took the form of simple dilapidation through time and disorganization rather than dramatic conflict; the more mundane instability of IRC was often translated into these dramatic terms but still testifies to constant awareness of the precariousness of their sociality.